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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,389	03/26/2004	Hajime Nakao	Q80691	7565

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2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER

WALKE, AMANDA C

ART UNIT	PAPER NUMBER
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1752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/809,389

Applicant(s)

NAKAO ET AL.

Examiner

Amanda C. Walke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama et al (EP 1179750).

Kodama et al disclose a positive photoresist composition comprising a resin, a solvent, nitrogen-containing basic compound (page 82), a surfactant (page 85), and an acid generator (pages 7-20).

The resin of the reference appears to meet the instant claim limitations. Specifically, the reference clearly teaches monomer meeting the instant claim limitations, and appears to have almost identical teachings. For example, (IV) is clearly preferred in [0041], V-1 to V-4 in [0049], and AII in [0114] along with various acrylic and methacrylic monomers. It is also noted that all of the monomers are either methacrylic or acrylic and examples of both are widely disclosed. Furthermore, the reference presents a number of suggested resins such as resin 36, which meets the claim limitations with the exception of the adamantyl group which is substituted with an ethyl group in the "1" position which does not meet the limitations of AII. However, in section [0114] these monomers are taught to be equivalent to those having substituents in the instantly claimed positions. One such monomer is employed in a resin having similar repeat units to that of 36. In resin 34, a monomer meeting the limitations of AII is employed, and it would have been

obvious to one of ordinary skill in the art to prepare resin 36 choosing to employ the adamantyl group containing monomer of 34 in the place of 36 as they are taught by the reference to be equivalent. Furthermore, it would have been obvious to one of ordinary skill in the art to add a lactone moiety which is preferred by the reference to any of monomers 6, 7, 13, or 14. With respect to the Tg requirement, the reference is silent with respect to a preferred Tg for the resin, however, given that the resins/ monomers taught by the reference are virtually the same as those instantly claimed, it is the position of the examiner absent evidence to the contrary, the resins of the reference meet the limitation.

With respect to the solvent, the reference clearly teaches the use of a mixed solvent in sections [0214] and [0215] and tables on pages 109 and 110. Sample #69 employs a mixed solvent of cyclohexanone (cyclic ketone b) and ethyl lactate (alkyl lactate a), which appears to meet the instant claim limitations. The reference also suggests the use of cyclopentanone, gamma-butyrolactone, methyl ethyl ketone, and PGMEA.

Response to Arguments

3. Applicant's arguments filed 12/14/2006 have been fully considered but they are not persuasive. Applicant has argued that replacing the adamantyl-containing monomer of polymer 36 with that of polymer 34 of the Kodama reference would cause the polymer to lose its acid decomposition function. The examiner respectfully disagrees. Both monomers are (meth)acrylic monomers taught to be equivalent in the specification of the reference as stated above, and adding almost an identical monomer having substituents should not cause the polymer to lose its acid decomposition function. Furthermore, the polymers 6, 7, 13, 14, are cited for their lactone monomers, and their teaching to employ them in similar resins, for example add them to polymer

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36. When this was done, the polymer would still comprise two acrylate monomers and meet the limitations of the instant claims.

The rejection over the Sato reference and the double patenting rejections have been withdrawn in light of applicant's arguments and filing of a TD.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C. Walke whose telephone number is 571-272-1337.

The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amanda C Walke
Primary Examiner
Art Unit 1752

ACW

March 19, 2007

Amanda C Walke
AMANDA WALKER
PRIMARY EXAMINER 3/19/07